

REMARKS

Claims 1 and 3-64 are pending in this application, claims 31-55 being withdrawn. By this Amendment, claims 1, 31 and 56 are amended to include the subject matter of claim 2, and claim 2 is canceled without prejudice or disclaimer. No new matter is added.

The courtesies extended to Applicants' representative by Examiner Bowers at the interview held February 18, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicants' record of the interview.

As agreed during the personal interview, entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution because we amend claims 1, 31 and 56 to incorporate the subject matter of claim 2; and (c) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

I. The Claims Define Patentable Subject Matter

A. §103(a) Rejection Over Gremel

Claims 1-4 and 12 are rejected under 35 U.S.C. §103(a) over Gremel et al. (U.S. Patent No. 6,918,887) (hereinafter "Gremel") in view of Pawlak et al. (U.S. Patent No. 5,674,397) (hereinafter "Pawlak"). The rejection of canceled claim 2 is moot, and the rejection of claims 1, 3, 4 and 12 is respectfully traversed.

As agreed during the personal interview, Gremel and Pawlak, alone or in combination, do not teach or render obvious a chamber that is structured to allow uninhibited fluid

communication between the first, second and third chamber openings, as recited in independent claim 1.

Thus, for at least these reasons, independent claim 1 is patentable over Gremel. Further, claims 3, 4 and 12 are also patentable over Gremel and Pawlak, for at least the reasons discussed above, as well as for the additional features they recite. Withdrawal of the rejection is thus respectfully requested.

B. Rejections Over Barbera-Guillem

Claims 1-12, 18-30, 56-58 and 64 are rejected under 35 U.S.C. §103(a) over Barbera-Guillem (U.S. Patent Application Publication No. 2004/0029266) over Pawlak; and claims 13-17 and 59-63 are rejected under 35 U.S.C. §103(a) over Barbera-Guillem in view of Pawlak and further in view of Sadri (U.S. Patent No. 5,494,822). The rejection of canceled claim 2 is moot, and the rejections of the remaining claims are respectfully traversed.

None of the applied references teaches or renders obvious a plurality of channels being formed within the housing, each of the plurality of channels being in fluid communication with one of the first chamber opening, the second chamber opening and the third chamber opening, as recited in independent claims 1 and 56.

The Office Action acknowledges that Barbera-Guillem does not disclose this feature. The Office Action further acknowledges that Barbera-Guillem teaches "that the openings and channels are formed as separate structures that are housed within the housing inner volume." See page 5 of the Office Action.

However, the Office Action asserts that Pawlak remedies this deficiency. The Office Action asserts that Barbera-Guillem and Pawlak are analogous art because they are from the same field of endeavor regarding gas-liquid separation systems. The Office Action further asserts that it would have been obvious to form the tissue transporter disclosed in Barbera-Guillem as a housing that includes openings and channels cut into the sidewalls. Specifically,

the Office Action asserts that: 1) "[t]he creation of channels formed as cavities within the solid housing and the creation of channels formed as autonomous units within the chamber volume interior represent functionally equivalent means for adding and withdrawing fluid from the chamber;" and 2) "[i]t would have required only minor structural alterations to the existing Barbera-Guillem housing to provide channels and openings similar to those disclosed by Pawlak, and this alteration would have been accomplished in a predictable manner." See page 6 of the Office Action. These assertions are respectfully traversed.

As discussed during the personal interview, one of ordinary skill in the art would not have had a reason to modify the tissue transporter of Barbera-Guillem to include the channels and openings of the bubbler of Pawlak for at least the following reasons. First, Barbera-Guillem and Pawlak are not analogous because the problems associated with the bubbler of Pawlak are not reasonably pertinent to the problems associated with the cell culture device of Barbera-Guillem. See MPEP §2141.01(a). Barbera-Guillem relates to a cell culture device used to effectively maintain and culture biological cells in a medium, and more specifically, to propagate prokaryotic, eukaryotic, hybrid, and artificial cells in scientific research, laboratory or clinical setting. See paragraphs [0001]and [0015]-0051] of Barbera-Guillem. Pawlak, on the other hand, is an apparatus used to remove air bubbles from blood and from dialysate solution. See the Abstract of Pawlak.

Second, modifying the tissue transporter of Barbera-Guillem and Pawlak would not require "only minor structural alterations." Barbera-Guillem discloses that the chamber of a cell culture device has a fluid labyrinth that incorporates a lumen including gas pathways and a plurality of bends and segments of tubing, as shown in Figures 32 and 33. See paragraph [0257] of Barbera-Guillem. The configuration of the plurality of bends and segments of tubing, traps the liquid during movement and manipulation of the device to minimize undesirable head pressure. See paragraphs [258] and [0261] of Barbera-Guillem. Replacing

the tubes with the channels of Pawlak would require a complete reconstruction and redesign of the chamber of Barbera-Guillem, and thus would require far more than minor structural alterations.

In fact, modifying the chamber of Barbera-Guillem to include the channels would render the chamber unsatisfactory for its intended purpose and change the principle of operation of the device of Barbera-Guillem. See MPEP §2143.01. The tubes of Barbera-Guillem are required to eliminate undesirable head pressure. See paragraphs [258] and [0261] of Barbera-Guillem. More specifically, the columns between the segments and bends of Barbera-Guillem hydrostatically balance one another such that there is no actual siphoning of liquid from one segment to another. A vacuum develops in the common and shared head space above each of the liquid columns to cause a capillary effect, which is commonly employed by technicians using open-ended pipettes to transfer liquids. See paragraph [0260] of Barbera-Guillem. Thus, modifying the device of Barbera-Guillem to either include or replace the tubes with the channels of Pawlak would render the cell culture device of Barbera-Guillem unsatisfactory for its intended purpose.

Accordingly, for at least the reasons discussed above, one of ordinary skill in the art would not have been motivated to modify the device of Barbera-Guillem to include the channels of Pawlak.

Further, neither Barbera-Guillem nor Pawlak teaches or renders obvious a chamber that is structured to allow uninhibited fluid communication between the first, second and third chamber openings, as recited in independent claims 1 and 56. As acknowledged by the Office Action, the openings and channels of Barbera-Cuillem are formed as separate structures that are housed within the housing inner volume. Further, as acknowledged by the Office Action, the gas and liquid are separated by a membrane in the debubbler of Pawlak. See page 5 of the

Office Action. Thus, the fluid communication would not be uninhibited between the alleged chamber openings in either of these references.

Sadri does not remedy the above-described deficiencies of Barbera-Guillem and Pawlak.

Thus, for at least these reasons, independent claims 1 and 56 are patentable over the applied references. Further, claims 3-30 and 57-64, which depend from claims 1 and 56, are also patentable over the applied references, for at least the reasons discussed above, as well as for the additional features they recite. Withdrawal of the rejections is thus respectfully requested.

II. Rejoinder of Withdrawn Claims

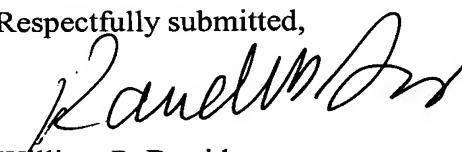
Applicants respectfully request rejoinder of withdrawn independent claim 31, upon the allowance of at least independent claim 1. Independent claim 31 include features similar to those recited in independent claim 1. Thus, upon allowance of claim 1, rejoinder and allowance of claim 31, and the claims depending therefrom, are respectfully requested. See MPEP §821.04.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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